इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 3825 (1990): Inset Mail Wire Healds for Jute Weaving
[TXD 14: Machinery for Fabric Manufacture]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA
JURIS
NON EXCUSAT

PROTECTED BY COPYRIGHT

*Indian Standard*

# INSET MAIL WIRE HEALDS FOR JUTE WEAVING — SPECIFICATION

*( Second Revision )*

## भारतीय मानक

## जूट की बुनाई के लिए इन्सेट मेल वायर ताने — विशिष्टि

( दूसरा पुनरीक्षण )

UDC 677·054·838·25

© BIS 1990

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

*September* 1990 **Price Group 1**

Jute Mills Machinery/Accessories and Spare Parts Sectional Committee, TXD 11

## FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards on 26 February 1990, after the draft finalized by the Jute Mills Machinery/Accessories and Spare Parts Sectional Committee had been approved by the Textile Division Council.

This standard has been formulated to provide guidance to the manufacturers of inset mail wire healds for jute weaving. This standard would ensure manufacture of inset mail wire healds of acceptable quality.

The present revision of the standard has been taken up in light of the experience gained from its implementation since its revision in 1974.

In order to bring the revised version in line with the current manufacturing and trade practices the following major changes have been incorporated.

a) The requirement for material used has been modified, and

b) The tolerances for various dimensional requirements of inset mail wire healds for jute weaving have been modified.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

# *Indian Standard*

# INSET MAIL WIRE HEALDS FOR JUTE WEAVING — SPECIFICATION

## *( Second Revision )*

## 1 SCOPE

**1.1** This standard specifies requirements for inset mail wire healds for use in jute weaving.

## 2 REFERENCES

**2.1** The Indian Standards listed in Annex A are necessary adjuncts to this standard.

## 3 MATERIAL

### 3.1 Wire

Carbon steel wire of 0·71±0·02 mm diameter with carbon content between 0·35 to 0·65 percent shall be used. The tensile strength of wire shall be 1 100 MPa (or 110 $\text{kgf/mm}^2$) when tested according to IS 1521 : 1972.

NOTE — Wire of 0·90±0·02 mm diameter may be used subject to the agreement between the purchaser and the manufacturer.

### 3.2 Inset Mail

Hardened and tempered steel wire or strip shall be used. The hardness shall be between 270 and 300 HV when determined by the method prescribed in IS 1501 ( Part 1 ) : 1984.

## 4 MANUFACTURE

### 4.1 Fixing of Inset Mail

The inset mail shall be inserted between two wires of the heald; the wires shall be tightly wound round an inset mail with twist as shown in Fig. 1. The position of the inset mail shall be at least 10 mm away from the centre of the heald towards the top end loop. However, the inset may be at the centre, provided the same is agreed to between the purchaser and the manufacturer.

### 4.2 Plating

The heald shall be tin plated by using tin anodes for electroplating conforming to IS 2384 : 1963 and the plating shall be smooth, free from cracks and other flaws which are likely to cause yarn breakage. The grooves formed by two adjoining wires shall be smooth and regular. The coating mass of tin plating shall be 5·5±0·7 $\text{g/m}^2$ when tested according to IS 1327 : 1977.

### 4.3 Finish

All joints shall be smooth and free from sharp corners. The plating and soldering of wire healds shall not cause gloss silk to be caught at the mail or wire when the heald is repeatedly rubbed with it.

### 4.4 Painting

The top end loops shall be distinctly painted with air drying type of paint ( *see* IS 168 : 1973 ) in order to avoid the healds being put on the heald carrying rods with the heald frame upside down.

## 5 REQUIREMENTS

### 5.1 Shape

The shape of inset mail wire healds for jute weaving shall be generally as shown in Fig. 1. The major axis of both the end loops shall coincide with the major axis of the wire heald. The plane of the inset mail and that of the end loops shall be at an angle of 45±5° unless otherwise agreed to between the purchaser and the manufacturer. If the wire heald is held vertical with the top end upward the minor axis of the inset mail shall be in the 'Z' direction as shown in Fig. 2. The twisted portion near the end-loop shall have two turns.

### 5.2 Dimensions

The dimensions and the corresponding tolerances of the two varieties of inset mail wire healds used for jute weaving shall be as given in Table 1. Other dimensions as agreed to between the purchaser and the manufacturer may be followed subject to the tolerances as given in Table 1.

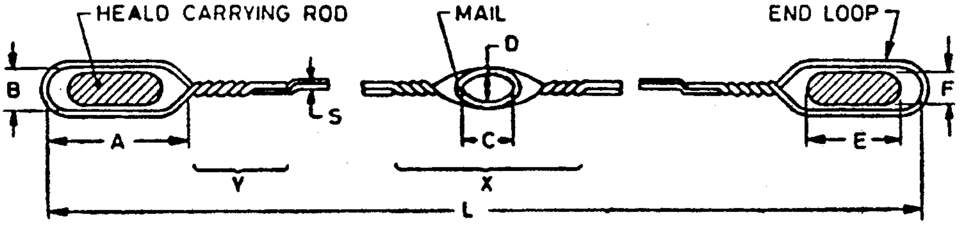

FIG. 1 INSET MAIL WIRE HEALDS FOR JUTE WEAVING

**Table 1 Dimensions of Inset Mail Wire Healds for Jute Weaving**

( *Clause* 5.2 and *Fig.* 1 )

| Variety No.<br>(1) | Length (*L*)<br>(2)<br>mm | End Loop Length<br>(*A*)<br>(3)<br>mm | End Loop Width<br>(*B*)<br>(4)<br>mm | Mail Eye Inside Length<br>(*C*)<br>(5)<br>mm | Mail Eye Inside Width<br>(*D*)<br>(6)<br>mm |
|---|---|---|---|---|---|
| 1. | 280 | 22·0 | 6·5 | 6·0<br>or | 3·0<br>or |
| 2. | 330 | 18·0 | 5·0 | 7·6<br>or<br>10·0 | 4·2<br>or<br>6·0 |
| Tolerance, mm | ±1·0 | ±1·3 | ±0·5 | ±0·125 | ±0·125 |

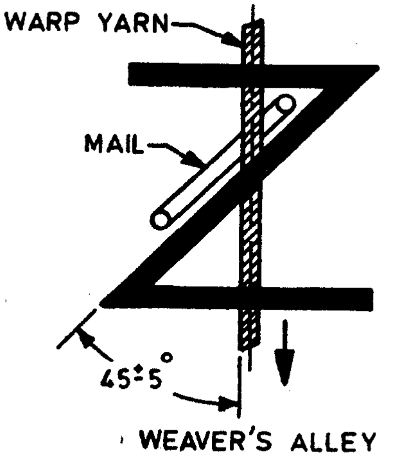

FIG. 2 DIRECTION OF MINOR AXIS OF MAIL

## 6 OTHER REQUIREMENTS

**6.1** The inset mail eyes shall be perfectly smooth and free from sharp corners. They shall be oval shaped and grooved at periphery.

## 7 PACKING

**7.1** A set of 250 inset mail wire healds for jute weaving after having been applied with a suitable rust preventive coating and threaded through the end loops by adequately strong cotton thread, shall form a bundle. These bundles shall then be packed in paper ( *see* IS 3962 : 1967 ) or polyethylene bags and made into suitable packages.

## 8 MARKING

**8.1** Each bundle or package shall bear the following information:

a) Name of the product,

b) Indication of the source of manufacture;

c) Variety No., and

d) Date of manufacture.

**8.1.1** The bundle or package may also be marked with the Standard Mark.

## 9 SAMPLING

**9.1** To ascertain the conformity of inset mail wire healds for jute weaving to the requirements of this specification single sampling plan with Inspection Level I and Acceptance Quality Level ( AQL ) of 2·5 percent given in Tables 1 and 2 of IS 2500 ( Part 1 ) : 1973 shall be followed unless otherwise agreed to between the purchaser and the manufacturer.

## ANNEX A

( *Clause* 2.1 )

### LIST OF REFERRED INDIAN STANDARDS

| *IS No.* | *Title* |
|---|---|
| 168 : 1973 | Specification for ready mixed paint, air-drying semi-glossy/matt for general purposes ( *second revision* ) |
| 1327 : 1988 | Method for determination of mass of tin coating on tin plate ( *third revision* ) |
| 1501 ( Part 1 ) : 1984 | Methods for Vickers hardness test for metallic materials: Part 1 HV 5 to HV 100 ( *second revision* ) |
| 1521 : 1972 | Method for tensile testing of steel wire ( *first revision* ) |
| 2384 : 1963 | Specification for tin anodes for electroplating |
| 2500 ( Part 1 ) : 1973 | Sampling inspection tables: Part 1 Inspection by attributes and by count of defects ( *first revision* ) |
| 3962 : 1967 | Specification for waxed paper for general packaging. |

**Standard Mark**

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

**Bureau of Indian Standards**

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

**Copyright**

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director ( Publications ), BIS.

**Revision of Indian Standards**

Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition. Comments on this Indian Standard may be sent to BIS giving the following reference:

Doc : No. TDC 17 ( 2549 )

**Amendments Issued Since Publication**

| Amend No. | Date of Issue | Text Affected |
|---|---|---|
| | | |
| | | |
| | | |

BUREAU OF INDIAN STANDARDS

**Headquarters:**

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
( Common to all Offices )

| Regional Offices: | Telephone |
|---|---|
| Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002 | 331 01 31<br>331 13 75 |
| Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola, CALCUTTA 700054 | 37 86 62 |
| Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036 | 2 18 43 |
| Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113 | 41 29 16 |
| Western : Manakalaya, E9 MIDC, Marol, Andheri ( East ), BOMBAY 400093 | 6 32 92 95 |

Branches : AHMADABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE.
FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR.
PATNA. THIRUVANANTHAPURAM.

*Printed at Printrade, New Delhi, India*